IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

OPAL RUN, LLC, *Plaintiff,* v. C & A MARKETING, INC., ET AL., *Defendants.*	Case No. 2:16-cv-00024-JRG-RSP ***Lead Case***

CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER

Before the Court is the opening claim-construction brief of Opal Run, LLC ("Plaintiff") (Dkt. No. 96, filed on November 4, 2016),[1] the response of OvernightPrints, Inc. and BEL USA LLA d/b/a/ DiscountMugs.com (collectively "Defendants") (Dkt. No. 98), filed on November 18, 2016, and Plaintiff's reply (Dkt. No. 99), filed on November 25, 2016. The Court held a hearing on the issue of claim construction on January 5, 2016. At the hearing, the parties agreed to the constructions presented in this Order. Having considered the arguments and evidence presented by the parties at the hearing and in their briefing, the Court issues this Order.

[1] Citations to the parties' filings are to the filing's number in the docket (Dkt. No.) and pin cites are to the page numbers assigned through ECF.

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I. BACKGROUND

Plaintiff alleges infringement of U.S. Patent No. 6,704,120 (the "'120 Patent). The '120 Patent is entitled "Product Template for a Personalized Printed Product Incorporating Image Processing Operations." The application leading to the '120 Patent was filed on December 1, 1999 and the patent issued on March 9, 2004.

In general, the '120 Patent is directed to technology for creating personalized print products, such as greeting cards and invitations. The invention is described as improving on the prior art by automating image-processing functions and by enabling access to image-processing functions separate from the software used to create the print product (the host application). These improvements allow image modification without the need for a skilled artisan and allow updates to image-processing functions without the need to update the host application. Central to the described invention is a data template used to create the print product. This product template includes information that identifies graphical components of the print product. It also includes information used to modify the graphical components. '120 Patent col.1 ll.8–12, col.2 .51 – col.4 l.54.

The invention's template is described with reference to exemplary print products (10, 10') depicted in Figures 1A and 1B, reproduced here and annotated by the Court. These products include three graphic components: a header (12), a footer (14), and a customer image (16, 16'). *Id.* at col.5 ll.43–67. Three exemplary data templates for the Figure-1B

fig.1A

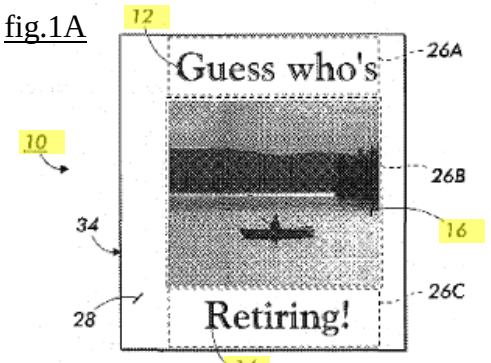
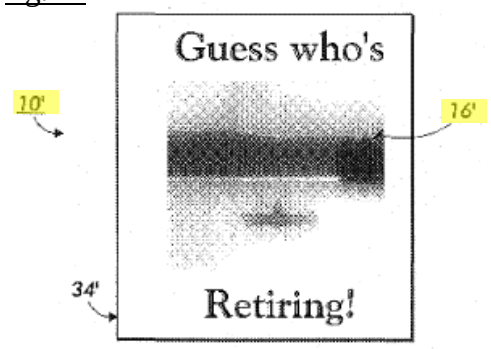
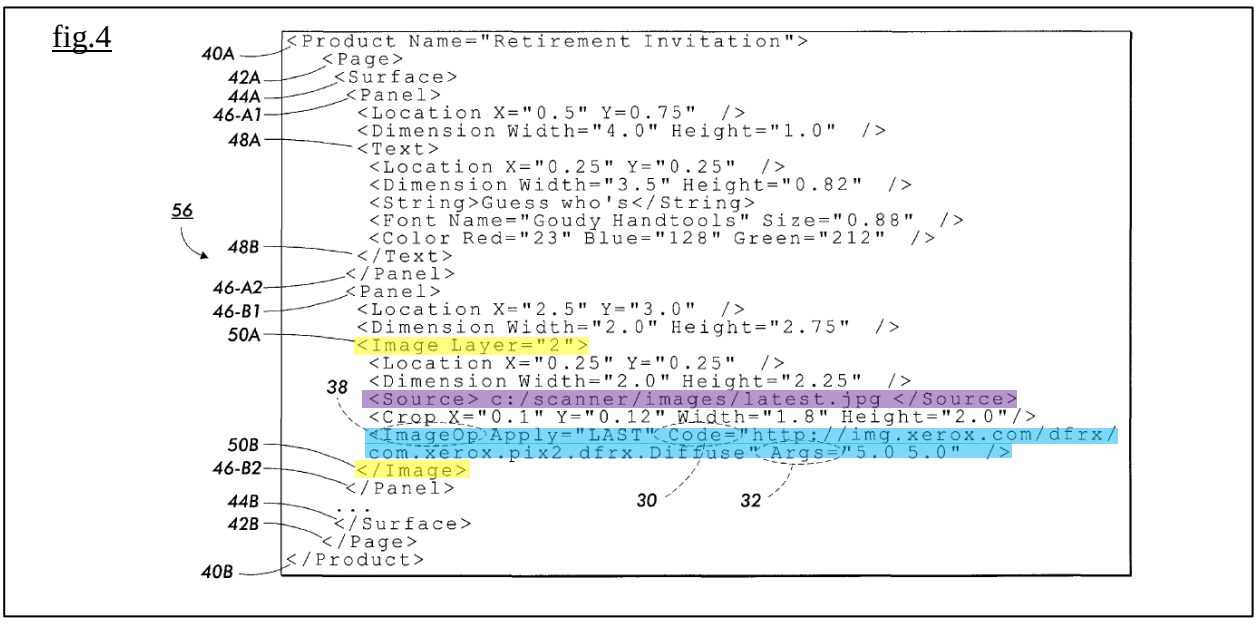


fig.1B



product (10') are described with reference to Figures 4, 5, and 6. Figure 4, reproduced here and annotated by the Court, depicts a data template (56) that includes a definition of the customer image (bounded by fields 50A and 50B, in yellow). The definition of the image includes information regarding the location of the image on the product and the dimension of the image on the product. The image definition also includes information identifying the image source file (in purple) and denoting the image-processing operation to be applied to the image (38, in blue). In Figure 4, the image-processing operation is denoted by a program name, "http://img.xerox.com/dfrx/com.xerox.pix2.dfrx.Diffuse," and arguments, "5.0 5.0." *Id.* at col.7 ll.29–67. In operation, the host application parses the data template to create the print product. When it identifies the image-processing operation, the application downloads and executes the image-processing program to alter the customer image. *Id.* at col.8 ll.17–24. The template of Figure 5 includes source code for the image-processing operation instead of identifying a program. In operation, the host application compiles and executes the source code in the data template. *Id.* at fig.5, col.8 ll.1–11, col.8 ll.17–29. The Figure 6 template instead includes image-processing executable code that, in operation, is executed by the host application. *Id.* at fig.6, col.8 ll.12–16, col.8 ll.17–32.

fig.4



The abstract of the ’120 Patent provides:

> For a personalized printed product that contains graphical elements, a data template in which instructions for operating on a graphical element are encoded. The data template can include the name of an executable computer program for accessing and downloading in order to generate the personalized printed product. Alternately, the data template can include source code that can be compiled and run by a computer, or machine code that is ready for execution. In a preferred embodiment, the data template is an XML file.

Claim 10 of the ’120 Patent, the asserted claim, recites as follows:

> **10**. A method for defining a personalized printed product using a data template that consists of at least one graphical component, said method comprising:
> (a) generating a data template that identifies the graphical component;
> (b) encoding, in said data template, an instruction to operate upon the graphical component; and
> (c) providing an application program on a computer, said application program configured to interpret said data template and to operate upon the graphical component in accordance with said instruction encoded in said data template.

II. LEGAL PRINCIPLES

A. Claim Construction

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *Id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed *infra*—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent. *Phillips*, 415 F.3d

at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) ("There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.") (vacated on other grounds).

"The claim construction inquiry … begins and ends in all cases with the actual words of the claim." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). "[I]n all aspects of claim construction, 'the name of the game is the claim.'" *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)). First, a term's context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim's meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id*. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314–15.

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id*. (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id*. (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). But, "'[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.'" *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-*

Devices, Inc., 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. "[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the U.S. Patent and Trademark Office ("PTO") and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.* at 1318; *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be "unhelpful as an interpretive resource").

Although extrinsic evidence can also be useful, it is "'less significant than the intrinsic record in determining the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id*. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are not helpful to a court. *Id*. Extrinsic evidence is "less reliable

than the patent and its prosecution history in determining how to read claim terms." *Id*. The Supreme Court recently explained the role of extrinsic evidence in claim construction:

> In some cases, however, the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period. *See, e.g., Seymour v. Osborne*, 11 Wall. 516, 546 (1871) (a patent may be "so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning"). In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the "evidentiary underpinnings" of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 841 (2015).

B. Departing from the Ordinary Meaning of a Claim Term

There are "only two exceptions to [the] general rule" that claim terms are construed according to their plain and ordinary meaning: "1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution."[2] *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) ("[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal."). The standards for finding lexicography or disavowal are "exacting." *GE Lighting Solutions*, 750 F.3d at 1309.

To act as his own lexicographer, the patentee must "clearly set forth a definition of the disputed claim term," and "clearly express an intent to define the term." *Id.* (quoting *Thorner*, 669

[2] Some cases have characterized other principles of claim construction as "exceptions" to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee's lexicography must appear "with reasonable clarity, deliberateness, and precision." *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee's statements in the specification or prosecution history must amount to a "clear and unmistakable" surrender. *Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 ("The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope."). "Where an applicant's statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable." *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

C. Functional Claiming and 35 U.S.C. § 112, ¶ 6 (pre-AIA) / § 112(f) (AIA)[3]

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Section 112, Paragraph 6, provides that a structure may be claimed as a "means … for performing a specified function" and that an act may be claimed as a "step for performing a specified function." *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

But § 112, ¶ 6 does not apply to all functional claim language. There is a rebuttable presumption that § 112, ¶ 6 applies when the claim language includes "means" or "step for" terms, and that it does not apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326; *Williamson*, 792 F.3d at 1348. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of

[3] The Court refers to the pre-AIA version of § 112 but understands that there is no substantial difference between functional claiming under the pre-AIA version and under the AIA version of the statute.

the entire specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (§ 112, ¶ 6 does not apply when "the claim language, read in light of the specification, recites sufficiently definite structure" (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (§ 112, ¶ 6 does not apply when "the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure"); *Masco Corp.*, 303 F.3d at 1326 (§ 112, ¶ 6 does not apply when the claim includes an "act" corresponding to "how the function is performed"); *Personalized Media Communications, L.L.C. v. International Trade Commission*, 161 F.3d 696, 704 (Fed. Cir. 1998) (§ 112, ¶ 6 does not apply when the claim includes "sufficient structure, material, or acts within the claim itself to perform entirely the recited function … even if the claim uses the term 'means.'" (quotation marks and citation omitted)).

When it applies, § 112, ¶ 6 limits the scope of the functional term "to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof." *Williamson*, 792 F.3d at 1347. Construing a means-plus-function limitation involves multiple steps. "The first step … is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). "[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id.* A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* The focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function."

Id. The corresponding structure "must include all structure that actually performs the recited function." *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). However, § 112 does not permit "incorporation of structure from the written description beyond that necessary to perform the claimed function." *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

For § 112, ¶ 6 limitations implemented by a programmed general purpose computer or microprocessor, the corresponding structure described in the patent specification must include an algorithm for performing the function. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). The corresponding structure is not a general purpose computer but rather the special purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).

D. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)[4]

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 2124. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 2130. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *Id.* at 2130 n.10. "[I]ndefiniteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

[4] The Court refers to the pre-AIA version of § 112 but understands that there is no substantial difference between definiteness under the pre-AIA version and the AIA version of the statute.

When a term of degree is used in a claim, "the court must determine whether the patent provides some standard for measuring that degree." *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, "the court must determine whether the patent's specification supplies some standard for measuring the scope of the [term]." *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005); *accord Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (citing *Datamize*, 417 F.3d at 1351).

In the context of a claim governed by 35 U.S.C. § 112, ¶ 6, the claim is invalid as indefinite if the claim fails to disclose adequate corresponding structure to perform the claimed functions. *Williamson*, 792 F.3d at 1351–52. The disclosure is inadequate when one of ordinary skill in the art "would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim." *Id*. at 1352.

III. AGREED CONSTRUCTIONS

The parties agreed to the following construction set forth in their Joint Claim Construction Chart Pursuant to Patent Rule 4-5(d) (Dkt. No. 100).

Term[5]	Agreed Construction
"data template" • '120 Patent Claim 10	structured data format for representing the composition of a personalized printed product as a layout comprising graphical components

Having reviewed the intrinsic and extrinsic evidence of record, the Court agrees with and hereby adopts the parties' agreed construction.

[5] For all term charts in this order, the claims in which the term is found are listed with the term but: (1) only the highest-level claim in each dependency chain is listed, and (2) only asserted claims identified in the parties' Joint Claim Construction Chart Pursuant to Patent Rule 4-5(d) (Dkt. No. 100) are listed.

IV. CONSTRUCTION OF DISPUTED TERMS

The parties initially disputed the terms: (A) "identifies the graphical component," (B) "instruction," and (C) "operate upon the graphical component." At the hearing, the parties agreed to the following constructions of those terms.

A. "identifies the graphical component"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"identifies the graphical component" • '120 Patent Claim 10	no construction necessary; plain and ordinary meaning	includes data that defines a graphical component, the definition including standard fields listing image source, dimensions, and location

The Parties' Positions

Plaintiff submits that the meaning of "identifies the graphical component" is "plain and unambiguous" and therefore the term does not need to be construed. Dkt. No. 96 at 7–8. Plaintiff argues that Defendants' proposed construction improperly limits the term to the exemplary embodiment which defines the graphical component with three pieces of information: image source, dimension, and location information. *Id.* According to Plaintiff, the '120 Patent allows the graphical component to be identified with information beyond these three pieces and without including these three pieces. *Id.*

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '120 Patent figs.1A, 1B, 4–6, col.4 ll.58–66, col.8 ll.39–42.

Defendants respond that each of image source, dimension, and location information are described as "standard fields," where a "standard field" is a field that is "common to all image definitions," and each exemplary embodiment in the '120 Patent is described as including each of these fields. Thus, Defendants conclude, the claim requires each of these fields. Dkt. No. 98 at 14.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’120 Patent figs.4–6, col.7 ll.50–55.

Plaintiff replies that “standard” does not mean “necessary.” Dkt. No. 99 at 5.

Plaintiff cites further **intrinsic evidence** to support its position: ’120 Patent figs.4–6, col.7 ll.52–53.

Analysis

The issue here is whether the data template necessarily “identifies the graphical component” using “standard fields listing image source, dimensions, and location.” The data template is not limited as Defendants suggest.

To begin, the Court notes that “graphical component” and “image” are not synonymous in the ’120 Patent. While an “image” is a “graphical component,” so too are text and graphics. Indeed, the patent expressly provides a definition:

> The generic term “graphical component” generally refers to any graphical object that is incorporated in the layout of a personalized printed product. Graphical components can include such objects as text strings, scanned images provided by a customer, or “canned” graphics such as borders and backgrounds, as well as clip art, syndicated cartoon characters, and the like.

’120 Patent col.5 ll.6–12; *see id*. at col.8 ll.46–48 (“It should be noted that an image processing operation can be applied to any graphical component[] be it customer image, text, or other graphic.”); *id*. at col.10 ll.23–25 (reciting “a field identifying said graphical component wherein said graphical component being an image or text defined by the identifying field” in Claim 5).

What Defendants identify as “standard” fields are not common to all definitions of graphical components. The exemplary print products of Figures 1A and 1B are described as “having a number of graphical components,” yet each has only one image. *Id*. at col.5 ll.43–67. And the exemplary Figure-4 data template used to define the Figure-1B product includes a “pair of Surface fields 44a and 44b [that] bound the graphical ***components*** that go on a front side 28 or

back side of the invitation." *Id*. at col.7 ll.35–37 (emphasis added). One of these graphical components is an image, defined by location, dimension, and source information. *Id*. at fig.4 items 50A/50B, col.7 ll.50–56. Another of the graphical components is text, defined by location, dimension, string, font, and color. *Id*. at fig.4 items 48A/48B, col.7 ll.44–49. Notably, Defendants' argument is entirely premised on the definition of the image graphical component in the exemplary template of Figure 4. The Court rejects the contention that the "standard" information used to define one exemplary graphical component but not another exemplary graphical component should be read into the limitation "identifies the graphical component."

Accordingly, the Court rejects Defendants' proposed "includes data that defines a graphical component, the definition including standard fields listing image source, dimensions, and location" limitation and determines that "identifies the graphical component" has its plain and ordinary meaning without the need for further construction

B. "instruction"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"instruction" • '120 Patent Claim 10	no construction necessary; plain and ordinary meaning	data specifying an image processing operation by: (a) identifying the location of an image processing program separate from the application program, (b) embedding source code, or (c) embedding executable code

The Parties' Positions

Plaintiff submits that while an "instruction" may be "source code" or "executable code," the "instruction to operate upon the graphical component" does not "embed" such code. Dkt. No. 96 at 10–11. Rather, Plaintiff contends, the "instruction" "tells the application software what program to run and where to find it ***in order to perform an image processing operation***." *Id*. at 11

(emphasis in original). Plaintiff further submits that while an "instruction" may include data "identifying the location of an image processing program separate from the application program," in the context of the '120 Patent such an instruction would also include downloading and executing the program. *Id*.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '120 Patent figs.4–6, col.4 ll.35–38, col.4 ll.44–46, col.7 ll.13–25, col.8 ll.21–24.

Defendants respond that the "instruction" of the claims is specially defined in the '120 Patent. Dkt. No. 98 at 6–7. Specifically, Defendants contend that "the present invention" of the patent is defined with a "product template [that] specifies an image processing operation" via any of three approaches: (1) "by specifying an image processing program … that can be downloaded from [a] remote host," (2) "as source code embedded within [the] product template," and (3) "as executable code embedded within [the] product template." *Id*. at 7 (quoting '120 Patent col.7 ll.13–24). According to Defendants, these three approaches distinguish the claimed invention from the prior art. *Id*. at 8 (citing '120 Patent col.3 l.65 – col.4 l.5). Defendants further respond to clarify that their proposed construction does not require the "instruction" to write source or executable code. Rather, the proposed construction requires the "instruction" to include such code, or to identify the location of a separate image processing program. This meaning, according to Defendants, is apparent in the context of the surrounding language in Claim 10, which requires "encoding, in said data template, an instruction …." *Id*. at 8–9. Finally, Defendants respond that an "instruction" that identifies the location of a separate image processing program does not necessarily include downloading and executing the program, even though such may be necessary to "operate on the graphical component." *Id*. at 9. Indeed, Defendants contend, the patent describes

an embodiment in which the separate image processing program is stored locally, and thus does not need to be downloaded to be executed. *Id*. (citing ’120 Patent col.6 ll.32–43).

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’120 Patent col.3 l.6 – col.4 l.5, col.4 ll.30–37. col.6 ll.32–43, col.7 ll.13–24.

Plaintiff replies that “instruction” is not ambiguous and therefore does not require construction. Dkt. No. 99 at 3. Plaintiff further replies that the ’120 Patent does not suggest the instruction “would embed or write code,” as required by Defendants’ proposed construction. *Id*. at 2–3.

Analysis

The issue here is whether the claimed “instruction” of the ’120 Patent is limited to source code, executable code, or an identification of a separate program for performing an image-processing operation. It is.

The Court agrees with Defendants that the invention of the ’120 Patent is defined such that the data template includes an image-processing instruction that is either source code, executable code, or an identification of a separate program. For example, the patent provides:

> In the present invention, product template 56 specifies an image processing operation using any of the following approaches, as illustrated in the examples of FIGS. 4, 5, and 6:
>
> (a) by specifying an image processing program 80 that is [] separable from application 60, where program 80 can be preferably available as a Java class that can be downloaded from remote host 72;
>
> (b) as source code embedded within product template 56 itself; or
>
> (c) as executable code embedded within product template 56 itself.

This evinces that the claimed invention necessarily includes such features. *See Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1136 (Fed. Cir. 2011) (“a patentee’s consistent reference to a certain limitation or a preferred embodiment as ‘this invention’ or the ‘present invention’ can

serve to limit the scope of the entire invention, particularly where no other intrinsic evidence suggests otherwise").

Consistent with such a limitation, the patent disparaged the prior-art approaches in which the host application provided the image-processing functions or in which a data file includes image-processing functions that are limited to the data-file programming language. *Id*. at col.3 l.42 – col.4 l.12. For example, the patent provides:

> However, the solutions presented in U.S. Pat. No. 5,485,568 require the software application program itself to provide the imaging utilities. There is no way to specify new imaging utilities when using such a solution without requiring an update to the application software.

Id. at col.3 ll.51–55. It further provides:

> Languages such as PostScript do not provide any method for invoking a separately stored utility or program for changing the appearance of an image. Nor do these languages provide any mechanism for storing executable instructions for image manipulation within the body of the stored document (except for executable instructions that are part of the inherent command set of the programming language itself).

Id. at col.4 ll.1–7. The invention of the patent was meant to overcome these failings of the prior art. *Id*. at col.4 ll.8–54. This evinces that the claimed invention excludes image-processing instructions that invoke image-processing functions of the host application or of the data-template programming language. *See Inpro II Licensing, S.A.R.L. v. T-Mobile USA Inc.*, 450 F.3d 1350, 1353–57 (Fed. Cir. 2006) (limiting a claim to exclude certain technology when that technology was disparaged in the patent and prosecution history and when overcoming the failing of that technology was described as a purpose of the invention); *see also*, *Chicago Bd. Options Exch., Inc. v. Int'l Sec. Exch., LLC*, 677 F.3d 1361, 1371–72 (Fed. Cir. 2012) (disparaged technology excluded from claims); *UltimatePointer, L.L.C. v. Nintendo Co.*, 816 F.3d 816, 822–24 (Fed. Cir. 2016) (same).

The Court, however, does not adopt Defendants' proposed construction. While the Court does not understand Defendants' proposed construction to require the instruction to write or embed code, as Plaintiff contends, the proposed construction is potentially ambiguous if taken out of context. Further, the Court discerns no reason that the image-processing program is encoded in the data template by "identifying the location of an image processing program." The patent describes merely "specifying" the program. And while the Figure-4 embodiment does this by identifying the location and name of the program, Claim 11 does this by "providing the name of an executable computer program."

Accordingly, the Court construes "encoding, in said data template, an instruction" as follows:

- "encoding, in said data template, an instruction" means "encoding, in said data template, (1) an identification of an image-processing program separate from the application program, (2) image-processing source code, or (3) image-processing executable code"

C. "operate upon the graphical component"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"operate upon the graphical component" • '120 Patent Claim 10	no construction necessary; plain and ordinary meaning	automatically, and without human intervention, modify the appearance of the graphical component (as opposed to its layout in the printed product)[6]

[6] Defendants originally proposed "automatically, and without human intervention, modify the data of the graphical component so as to provide an artistic appearance." Dkt. No. 93 at 15; Dkt. No. 96 at 11; Dkt. No. 98 at 10. In its opening brief, Plaintiff addressed the original proposal. Dkt. No. 96 at 11.

The Parties' Positions

Plaintiff submits it would be improper to construe the claims to preclude human intervention in the process. Dkt. No. 96 at 11. Specifically, Plaintiff contends that the '120 Patent is directed to personalized printed products, and personalization requires human interaction such as selection of the desired design. *Id*. at 11–12.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '120 Patent col.6 ll.6–11, col.8 ll.49–54.

Defendants respond that while a human may be involved in the selection of a template, the '120 Patent describes that operating on the graphical component is an automated process that proceeds without human intervention. Dkt. No. 98 at 11–12. Defendants further respond that the patent distinguishes between processing an image by operating on the graphical component and altering the layout of the product. *Id*. at 12–13.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '120 Patent col.1 l.66 – col.2 l.2, col.3 ll.10–16, col.4 ll.8–10, col.5 ll.21–35, col.5 ll.53–67.

Plaintiff replies that the patent allows for "user confirmation prompts and/or present[ing] choices to the user for completing aesthetic operations to be performed upon the graphical component." Dkt. No. 99 at 3–4. Plaintiff further replies the patent allows the limitation "operat[ing] on the graphical component" to modify the location of the component by, for example, stretching the component, or fading it behind other components. *Id*. at 4.

Plaintiff cites further **intrinsic evidence** to support its position: '120 Patent col.5 ll.21–23.

Analysis

There are two issues raised by the dispute. First, whether the user may play any role in "operat[ing] upon the graphical component." Second, whether "operat[ing] on the graphical component" is limited to modifying the appearance, as opposed to the location, of the graphical component. With respect to the first issue, the Court understands that the application program is configured to "operate on the graphical component" per the instruction. But this does not preclude all "human intervention" in the process. With respect to the second issue, "operate on the graphical component" corresponds to an "image processing operation," and such operation is defined in the '120 Patent as limited to altering the appearance of the component.

The patent is directed to automated image processing. For example, the patent disparages the prior-art, noting that "full-fledged image modification capabilities" are "available only on more sophisticated imaging systems that require a skilled operator/artist." '120 Patent col.2 l.51 – col.3 l.13. The patent further provides that "[a]utomating the utilities that provide these image modifications would allow their use by an unskilled operator in preparing a greeting card, invitation, or similar type of personalized printed product." *Id*. at col.3 ll.13–16. Ultimately, the need addressed by the invention is described as follows:

> Thus, it can be seen that there is a need for providing a flexible set of imaging utilities for ***automated*** enhancement of personalized printed products, where the set of imaging utilities can be regularly updated and available to customers in preparing personalized printed products.

Id. at col.4 ll.8–12 (emphasis added). Indeed, the "image processing operation" of the patent is defined as "an ***automated*** tool." *Id*. at col.5 ll.21–23 (emphasis added). That is, when the application program operates on the graphical component according to the instruction in the data template, it does so automatically.

The instruction-based image-processing operation is automated in that it executes without the need for user interaction. The patent describes an "automated" process as one that does not need user interaction. For example, in describing an exemplary automation, the patent provides:

> With this type of automation as a design goal, an application program for greeting card setup may, based on a controlling data template, automatically calculate a scaling factor for a scanned image based on its original size. The application program can then scale and crop the scanned image accordingly to place it in position on the page layout, ***without the need for operator interaction***.

Id. at col.2 ll.9–15 (emphasis added). This comports with the plain meaning of "automation" or "automatically." The nature of the patent's automation is stated in Claim 10 as "said application program configured to interpret said data template and to operate upon the graphical component in accordance with said instruction encoded in said data template." *Id*. at col.10 ll.45–49.

Including the phrase "without human intervention" in the construction may, however, pose some ambiguity instead of clarifying claim scope. Even though the image-processing operation is automated—and therefore executes without user interaction—there can be some human intervention in the process. For example, the patent describes that the host application includes an interface through which a user may select a design from "displayed previews and screen prompts." *Id*. at col.6 ll.8–11. The design is associated with a template having image-processing instructions. *Id*. at col.6 ll.11–13, col.6 ll.32–33. By selecting the template, the user selects the desired image-processing operation and thereby intervenes in the image-processing operation, even though the image-processing operation then proceeds automatically for the selected template. While Defendants apparently do not intend to preclude such human intervention, including "without human intervention" in the construction threatens such a preclusion.

The image-processing operation of the patent alters the appearance of the graphical component. Indeed, it is defined that way: "[t]he term 'image processing operation' indicates an automated tool that modifies digital image data to alter the appearance of an image in some

controlled manner." *Id*. at col.5 ll.21–23. Changing the position of the graphical component on the print product does not necessarily alter the appearance of the component (even though it alters the appearance of the product). Altering a graphical component's appearance may, however, involve altering its layout, as Plaintiff argues. For example, stretching the image would alter the appearance of the image and its layout in the printed product. That said, the Court does not understand that Plaintiff's proposed "as opposed to its layout in the printed product" threatens to preclude modifications to the graphical component that also change its layout in the printed product. Indeed, the phrase helps clarify the distinction between the appearance of the graphical component and the appearance of the printed product.

Accordingly, the Court construes "operate upon the graphical component" as follows:

- "operate upon the graphical component" means "automatically alter the appearance of the graphical component (as opposed to its layout in the printed product)."

V. CONCLUSION

The Court adopts the constructions above for the presented terms of the '120 Patent. Furthermore, the parties should ensure that all testimony that relates to the terms addressed in this Order is constrained by the Court's reasoning. However, in the presence of the jury, the parties should not expressly or implicitly refer to each other's claim construction positions and should not expressly refer to any portion of this Order that is not an actual construction adopted by the Court. The references to the claim construction process should be limited to informing the jury of the constructions adopted by the Court.

SIGNED this 31st day of January, 2017.

ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE